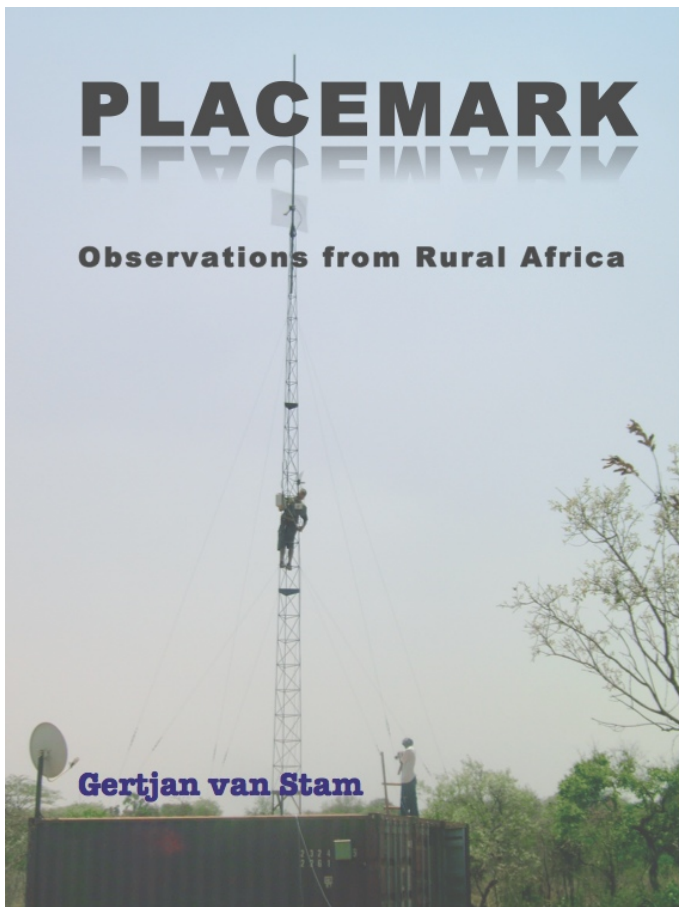


PLACEMARK

Observations from Rural Africa

Gertjan van Stam



“My friend Gertjan has many ideas. I never cease to learn something interesting. My advice: read further.”

Peter Agre, *Nobel Prize Laureate, Johns Hopkins University, Baltimore, USA*

“As Chief and Vice-Chairperson of the House of Chiefs, I am really inspired by this book. It tackles cultural issues that affect rural communities across Africa and describes African realities of life. It might be the first of its kind describing integration of technology and culture. I trust it will inspire people on both sides of the digital divide, as it asserts the necessity for higher technologies and rural communities to merge in a collaborative effort to bring the two sides of our globe together.”

Chief Chikanta, *House of Chiefs, Zambia*

"I admire Gertjan for his creativity, unique vision and unbelievable stubbornness. Combine these characteristics with a good portion of humor and keen eye for worthwhile snapshots of life and you get the inspiring Placemark."

Jasper Grosskurth, *author 'Futures of Technology in Africa', Nairobi, Kenya*

“Placemark is a readable and absorbing journey of experience, covering many topics in such a short book. The completeness of each theme embarked on is thrilling. The work is a witty re-collection and reflection of oneself and the environment and yet it sends a strong message to who ever wishes to stop and reflect on their past stand point and face tomorrow with different approaches to issues pertaining to the rural situation - whether one lives in Africa or the West!”

Alex Muyowe, *Chartered Accountant, Choma, Zambia*

“I have followed with great interest, admiration and respect what Gertjan van Stam and Janneke van Dijk have been doing in Macha. They follow their calling with compassion and perseverance, demonstrating what humble, servant leadership means.

The stories in ‘Placemark’ are testimony of years of hard work, of growing insight in the specific context of rural Africa and local, traditional culture, of frustration about bureaucracy and stubbornness of the development aid establishment, of lessons learned, of the possibility of sustainable progress, and of the joy of being.

I just returned from my third trip to Macha, which was three years after my previous visit. The progress I have seen was amazing and inspiring. Empowered by being connected to the Internet, the rural community develops in many fields: education, healthcare, agriculture, sustainable energy, craftsmanship, entrepreneurship. Houses, lodging, a restaurant, care house, schools, and a radio station have been built and construction is continuing. Several villages in other parts of Zambia have been connected to the Internet and their peers from Macha are training local people. But maybe the greatest achievement is the fact that local talent has taken up leadership and is in full control of operations. Truly, there is hope for rural Africa!”

Gerard van Oortmerssen, Professor of ICT, Tilburg, Netherlands

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Gertjan van Stam is an engineer living with his family in rural Macha, Zambia, since 2003.

Placemark

Observations from Rural Africa

Gertjan van Stam

Chief Macha Area

Choma District

Southern Province

Zambia

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12 September 2011

For my parents, Jacobus and Hendrina

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Introduction

Our kids play outside as usual. Merel (10) and Elmo (8) have grown up in rural Africa. Both of them show remarkable social skills that, like others around them, they demonstrate daily whilst roaming our rural neighborhood with their group of friends.

I am wondering if I ever will get it right here in Africa. My engineering background and experience might be helpful in observing, but they are not necessarily conducive to participating in this enthralling environment. Well, I will continue to try, and mark our rural place.

Since 2003, we - that is Janneke van Dijk, Merel, Elmo, Beauty, and myself – have been living in the rural community of Macha in Zambia, Africa. Macha is our home, amidst a sea of undulating bush land where people live along with extended family, in homesteads; where daily life centres on communal activities like working in the fields growing food, and where everything is discussed, discussed, and discussed again.

Rural areas are deceptively tranquil. For us, the 10 consecutive years in rural Africa resemble more of a rollercoaster ride. Amazed by the ‘deep waters’ people dwell in around me, I endeavour to gain insight and to draw out purposes, visions and plans in those who cross my path. I observe, and try to participate in the community, hopefully contributing and facilitating, through interaction with and introduction of technology, to strengthen the infrastructure for human interaction and training.

In Macha, an interactive community development structure is cultivated and solidified through the collaborative efforts of many. The model focuses on inspiring people in rural communities to reach their collective and individual potential. Now dubbed ‘Macha Works’ a co-operative of **local heroes** marches on for the betterment of their rural communities.

From 2008 onwards, my observations spilled over onto the Internetⁱ. In the form of blogs, they are there for all to see, in the hope that these words could build bridges between international communities. This book compiles these observations and emerging thoughts in chronological order. The subject matter is a haphazard mix of aspects of daily life, reflections on rural Macha and the world, the Internet as a stepping-stone towards sustainable progress, and culture.

This book is dedicated to my parents, who shot this arrow. Sally Green edited its content.

Of course, these observations formed while being guided by many individuals, present and not present. It is with gratitude to them – and foremost my family as life partners in this journey – that I present these observations as a Placemark ‘for what it is worth’.

Gertjan van Stam, Macha, September 2011

Epicⁱⁱ

The screen in the airplane seat in front of me shows a curved line from IAD (Washington) to JNB (Johannesburg). The line touches West Africa, somewhere below Mauritania, but then quickly goes back over blue, the Atlantic Ocean. Now the screen switches to numbers. Height: 10,073 meters, Outside temperature: -47 Degrees Centigrade, Ground speed: 905 km. Distance traveled: 4064 kilometers, Distance to destination: 9160 kilometers, Time to destination: 10.26 hours. Time at destination: 04.37 hours AM, Time of arrival: 02.57 hours PM.

This is an epic journey:

about 15 hours of flying time, from take-off to landing, direct from Washington DC to Johannesburg SA, from winter to summer, from North America to South Africa, from here to there.. An aeroplane is a marvel of engineering indeed.

Now trying to have body, mind and spirit moving at the same pace while I am travelling.

Hotⁱⁱⁱ

Arriving back in Macha, it is all hot. The temperatures are high - over 40 degrees these days. My family is hot - their love is by far the hottest thing existing. Ubuntu Campus is hot - with a great new jungle gym. And the thoughts are hot - how to deal with it all. It is boiling!

It was good to be in the USA for two weeks, after 5 years absence from it. The West is an important world-player and seemingly dictates many priorities in the world. I noticed a lot less explicit *grandeur* in the US compared to previous visits. The cars are smaller, and advertisements feature less boasting 'I am #1'. Still lots of 'vogues' and the latest 'cool thing'.

Recently, I was viewing the animated movie, Story of Stuff, whose link was sent to me today through the Internet. It puts it all in a rather bleak perspective.

It is good to be back in Macha. Heartwarmingly, a number of people visited our house to welcome me back home today.

When looking around, it is obvious that some of the answers to the problems of the world are here, for grabs, right at our rural African doorstep:

- * the value of relationships
- * the value of sustainable progress that benefits all
- * the value of lessons learned through history
- * the value of not giving up and persisting in face of whatever adversity
- * and the value of sheer enjoyment of life.

It is wonderful that many people met in Washington, New York, Boston, Norfolk, Santa Barbara and Los Angeles resonate and confirm this insight, hopefully offsetting the CO2 added to the atmosphere by my recent journey. Now it is important to continue forward and expand our community, so there will be true, continuous and inclusive collaboration all over the world.

That will be cool!

Pick A Baggy^{iv}

Johannesburg International Airport is becoming renowned for its bag-picking. Once again, something was stolen from my luggage this week. It is pretty amazing, as my hard suitcase was locked and arrived locked. But a relatively small external computer DVD-drive was taken out of its box whilst in the bag. It was in the locked suitcase, and in a box, in another box, in the suitcase. The box was neatly closed again, as was the suitcase. And nothing else was missing! It took a pretty sophisticated thief, one who needs equipment, I guess, to know what was in the suitcase.

It is not the first time that my stuff has gone missing at Johannesburg International airport. Early this year two duffel bags, with building materials from people coming to help in Macha, went completely off the radar, never to be seen in Lusaka, nor where they came from. Specific electronic equipment also went missing - video and photo equipment, watches - have all been removed from suitcases of family and friends flying through O R Tambo International Airport.

But the huge, wonderful gift from friends in the USA - a full size Yamaha electronic keyboard - went through untouched.. Maybe it was too big? Yes, ok, it got delayed for three days and went completely off the radar in the baggage system, but, thank God, it showed up at lost luggage in Lusaka on Friday. Flying Mission picked it up and flew it to Macha, and now Merel, Elmo and their friends don't talk about anything else apart from 'The Piano'. It is another miracle: a full size electronic piano at our village residence. Merel is scheduled to receive piano lessons from friends in the USA via Skype.

Sharp Shooting^v

In the pursuit of sustainable progress at Macha, we take an holistic approach to relational thinking. That has delivered tangible results.

It is always good to come back to Macha from other places in the world to see what is being achieved. We are able to bring together a broad coalition of partners in the South and the North whose aim it is to inspire **local talent** to take the reins in their communities, realising their collective and individual potential. It is being done at the Centre of Experience in Macha. We hope for many more Centres of Experience to follow - ideally at least one rural site in each province – so we can harness the local and rural experience and bring it ever nearer to all those who can benefit from this resource.

The three key ingredients of the approach are:

1. internet connectivity
2. **local talent** in the driver's seat
3. scalable solutions that work in rural settings.

Man, are we making progress! Everywhere I go I find people busy.

Today I touched base for two hours, after a two-day visit to Lusaka. In that short space of time I saw all this mind-boggling amount of activity – and this is just the tip of the iceberg of what is actually happening:

* **local talent** working on clearing for high voltage power lines to go to the Ubuntu Campus

* **local talent** working on new roads to a proposed site for Bio Energy production

* **local talent** working on the replacement of a worn-out water pump

* **local talent** working on building a classroom for LITA (the ICT-training branch of the proposed Works Academy at Macha)

* **local talent** working on finishing the MICS House, the housing facility intended for destitute children at MICS including housing for dorm parents who will guide the children

* **local talent** finishing the first two rondavel housing experiments at Macha

* **local talent** improving the roof of Vision Broadcasting House at the onset of the rains

* **local talent** working on new technology implementation at LinkNet in a makeshift laboratory environment, in both network mesh technology and access and accounting technology.

While going around I met **local talent** from which I learned about our financial and accounting processes; also outstanding draft reports and funding requests. With **other talents** I learned about the implications of the ethics of administration and our wish to be fully transparent to the local community, the country of Zambia and also the international stakeholders and the international community at large. Then we continued, discussing the flight schedule of the airport with the local leaders at ABFA-MACHA Aerodrome, bringing new drugs to be tested at MIAM that I transported from Lusaka, handing over an old battery that I received in town for a local person in the rural area. All the time we were discussing how to make a culturally appropriate response to the realities we had observed during this short tour. With us was also a Dutch student who just arrived in the country yesterday.

I continued working on putting the verbal information into written format. It covered locally-defined and tested ideas, plans for health, education, transport, communications and agriculture. Great! I have got access to the Internet in the whole of Macha on any device, so we can continue communicating and interacting over cultural, geographical, time, or any other barrier.

MICS^{vi}

This morning I went to observe proceedings at Macha Innovative Community School (MICS). For the first time this season we had steady rain in the early morning, so it was a nice, fresh start today at MICS House. It was impressive to see the discipline of local teachers being supported by others from various backgrounds and areas from Zambia and overseas. There is strict and tight planning, and lessons start on time and hit the ground running. There is drive and power in all involved, which is rubbing off. The head teacher commented: "These children learn more than I did during my primary school".

The Christmas play was being rehearsed. During the first years of education the focus is on Reading/Writing and Mathematics. This provides the foundation for further development. I observed Grade 4/5 breeze through a school DVD on the subject of paragraphs and, when probed, the students had no problem giving the definitions of imperative, exclamatory, and interrogative questions. In Grade 3, I saw the children working on the different prefixes and suffixes of words, and on sentences. In the Reception Class the children were at "W", almost at the end of the alphabet. During activity classes each grade worked with gusto at puzzles of different complexity.

It is wonderful to see that MICS is succeeding in integrating high quality education with local resources in a rural African setting. It was special to see how the teachers communicate within the context of the cultural setting in a truly African way. They focus on positives, affirming good behaviour and results, all in a collaborative and inclusive environment.

MICS currently has about 100 students, with numbers estimated to double at Ubuntu Campus in about three more years. At the same time MICS acts as an example-school, inspiring and encouraging growth in the other primary schools in the area (and beyond). This will up the need for resources, with an ever-increasing demand for class rooms, teachers and

housing. All this is to assure quality and quantity growth. The current team has grown MICS from the ‘proof-of-concept’, with one class room in 2006, to ‘proof-of-reproduction’ with two class rooms in 2007, to ‘proof-of-production’ with 7 grades operating in 2011. They have never ceased to work hard in a difficult and resource-challenged area. To grow this work is a massive, important and rewarding challenge.

Cross Culture^{vii}

This morning I saw two ladies sitting at the Vision Community Works, Library and Craft shop in Macha. They are from Mabombo area in Chikanta Chiefdom. The previous night they had travelled the 60 kilometre distance over near-impassable dirt roads. They come to try to sell their locally-crafted Tonga baskets and will go back with money to pay for transport, their children's education, clothes, and other goods that will help them in daily rural life.

It is moving to see that opportunities in Macha are drawing people from far. These ladies come with their hands full of goods they have made. In the process they chat with people from Macha and learn about the developments that are taking shape. They will go back inspired by fresh ideas for adapting their own communities in order to reach their collective and individual potential; empowered by what they have seen with their own eyes.

It reminds me what a long road it has been to come this far as a community; I have had to learn a lot, and I continue to learn every day.

First of all I had to get rid of my drive *to help*. In this inclusive environment, everybody is geared towards helping each other, and this includes geared towards *helping me*. I had to re-assess the virtues of rationality, as in the rural African context first and foremost relationships, *relationality* is where it is all about.

Further, I needed to reorient from looking at goals set by answering 'what?' questions, to goals that are enshrined by answers on 'who?' questions.

My western sense of individuality also needed to go, since, in rural Africa, the individual is defined as being part of the collective, the community.

And on it went. Next to go was my understanding of (legal) security. This needed re-routing to link security to

relationships with persons in authority, as they have received such authority to secure that all people take part of the community.

And my drive to accumulate tools to get the job done was challenged by the environment, where one acquires the resources, including tools, for the job only through tested relationships.

It takes a considerable length of time to become a member of the rural African community, and experiences from my previous “non-rural African” life were unhelpful! An important barrier to *being together* was removed when I realised that my ‘default’ linear view on time clashes with the more corkscrew or circular notion of time in rural Africa. To begin with, I was mainly motivated by opportunities in the future. It all became more wholesome when my appreciation grew for the community, where people work from wisdom and knowledge distilled from past experience.

It is a privilege to be together with the ladies from Mabombo. I recognize that it is almost inevitable that new entrants to rural Africa go through sometimes severe culture shock and strain in their personal lives as they adjust to the local environment. We have done that for almost seven consecutive years. It is worth it!

The Bore hole Pump^{viii}

Water comes from deep down in Macha. In this area, boreholes are over 70 metres deep. The yields are low, due to the solid rock formations in the ground. Boreholes often run dry. Continuity of water supply in rural Macha is a challenge. Today we had a miraculous saving of our lone borehole and pump at Ubuntu Campus.

We had to drill three boreholes in order to find one yielding water - rated 1.5 litres per second, 60 metres deep - at Ubuntu Campus. Costs of drilling one borehole range between EUR 4,000 and 8,000, depending on the supplier and relocation costs of the drilling rig to our rural area.

Our one-horsepower borehole pump cost EUR 1,500 one year ago, excluding transport costs, and it stopped working about a month ago. Diagnosis: burned engine! Result: no water at Ubuntu Campus. Leaving people hauling drinking water in all kind of barrels and jars to Ubuntu Campus, I made a trip to Lusaka with the pump for assessment (transport cost USD 800). The diagnosis was confirmed: a burned engine due to a worn-out pump. As we have 'run dry' in more than one sense, I bought a new 1.5 horsepower engine, with pump, with private funds and took it back to Macha.

Upon assembling the pump and pipes, and lowering it all into the borehole, it was found that our two operational generators were not strong enough for the new pump. Fine-tuning of the voltage from a newly-acquired generator took another couple of days.

After a few minutes of pumping, the new borehole pump stopped working. The electronics became hot and the pump needed to be stopped. No water was flowing. Assessment was made by the experts from Lusaka by phone: it was a wiring error. Our chief technician took the Thursday plane from ABFA- MACHA Aerodrome to Lusaka with pump, engine, electronics and all 100 meters of wire. That same day, it was

assessed that, although the wiring was OK, the pump was full of mud, drawn in during the short exercise. After the cleaning of the pump, Lemmie took the whole assembly back to Macha. He arrived home at 02.00 hours after taking a taxi in Lusaka; bus from Lusaka to Choma; then taxi from Choma to Macha.

On Friday morning the restored pump with the well-tuned generator was pumping from a higher position and water filled the tank at Manzi Office (manzi = water). After 15 minutes the borehole ran dry and the pump had to be switched off.

Yesterday the whole assembly had to come out again. With the pump lower, it worked well for 10 minutes, and then again water stopped flowing.

Now in crisis, as users were out of water again on days of almost 40 degree temperatures, good relationships ensured that 10 people would work on the bore hole site this Sunday morning. Disaster really struck when the nylon pulling-rope, attached to the pump, broke, just when the pump, engine and pipes were reaching the surface! The sisal-based rope was probably weakened by a year of soaking in water in the borehole. Now the pump, with about 20 metres of 40 mm diameter piping, full of water, was hanging only on the electricity cable attached to the pump.

At this point I was invited to come to the scene.

I saw a hugely-strained electricity cable holding many tens of kilogrammes of pump, engine and water-filled piping about 10 metres under the surface, in the borehole. The risk of losing the borehole pump and the borehole itself was huge, as upon dropping the assembly could clog up the usable range of the borehole.

Well, there were no other alternatives so we started pulling on the strained electricity cable. Five or so men carefully pulled the heavy load. When the pipe came in sight, the wire started to slip and it felt like the electricity cable would snap and the whole assembly would soon disappear into the deep hole! We blocked the cable and reviewed our options. There

were none so the unanimous decision was to keep pulling. Apparently 'down there' something got some grip, the electricity wire was still in one piece, and the pump came further out. Then the electricity cable slipped down again.

Against all logic, we kept pulling and, miraculously, the water piping now appeared from the borehole. When it was halfway out, we noticed the electricity wire had come completely loose from the pump and was entangled in a bunch of thin earth wiring between the borehole pump and water pipes. Further pulling of the bundle revealed that the earth wire also had come loose, and become entangled with the remaining nylon rope. In the end only the rope was attached to the load.

Although there are still many obstacles to overcome before we have water running again - like where and when to get new nylon rope and new water pipes - this morning, when it was all over, it took over 15 minutes for the adrenaline in my body to settle to normal levels. Elation over the miracle of saving the borehole continues!

Sports, part of Vision Community Works^{ix}

At Macha we have many students visiting us from various 'walks and activities of life'. They take time to be part of what is going on in Macha. Some do so as part of their studies, others as an extra activity. They become human resource for those tasks that need attention, and might fall in between the cracks. Most students come to be involved in the medical fields at Macha. Some students are easy-going, some need lots of attention, but for each individual it is a worthwhile and moving experience to live within the rural African community. Students frequently keep blogs about their experiences and, with a Google search, you might find several of them.

Today a student gave his final presentation after a three-month period in Macha. He is a Physical Education (PE) student at the University of The Hague and has been instrumental in helping the activities of Vision Community Works and Sports take another leap forward. Pim worked under the supervision of local community works expert, Fred Mweetwa.

Sport is instrumental in facilitating opportunities in rural community development. It provides tools in the development path between value systems. Those value systems pertaining to traditional and ritual ways of tribal group life and those that incorporate higher authority and direct, absolutist rules. It trains participants in asserting themselves and handling dominant behaviour and power; it imparts the real-life skills needed when confronted with a changing world. And, of course, sport is conducive to good health.

Although we have been trying for years, it has been difficult to get attention on, and funding for, sports development in rural areas. As Macha is now used to 'new developments', Pim entered a fertile area. Like most students, he worked diligently and supported the teaching of Physical Education at various schools, including Lupata Basic School and MICS. This

inspired local educational talent to consider questions such as 'why sport?', 'how do we provide sport education?', and how to use sports equipment. This went alongside training and participating with **local talents** in organising sports events, workshops and more.

We intend to measure the effectiveness of visiting experts and students in the amount of co-production with **local talent** they produce. To this end, Pim worked with Mr. Kennedy Kanane, Physical Education and Mathematics teacher at Macha's Francis Davidson Secondary School, to draft a 'rural proof' syllabus for Physical Education.

There is still a lot to do and there is a lot of room for further study. For instance, how to understand the rural mindset and view of sports. And how to build and maintain an innovative Vision Sports Facility at Ubuntu Campus. However, it is clear that sports activities are another important area for holistic and sustainable progress in rural Africa.

Existence Farming^x

This morning whilst cycling with Elmo, Beauty and Merel to the primary school at MICS, the air was full of noises of people working in the fields. Men cheered their oxen pulling the plough, and children joined their mothers and grandmothers in working with the hoe in the fields. Holes are made, seeds are dropped, holes are covered and prayers go up for good rains and affordable fertiliser.

Yesterday afternoon the first good rainstorm hit Macha. So today people plough and plant. Last week we brought 1,200 kg of seed maize from Choma to Macha for the workers at Building Activities. Just then all was still very, very dry. Today looks different, with muddy paths and messy roads. One big rain storm makes all the difference. People are working in the fields, working quickly from sunrise till going to work in the hospital, the schools or the main works at Macha. Every piece of land is being used.

The encyclopedia defines Subsistence Farming as: *a form of farming in which nearly all of the crops or livestock raised are used to maintain the farmer and his family, leaving little, if any, surplus for sale or trade.* We might have to define 'Existence Farming' too.

This morning alone, I counted four power outages of the electricity grid, and power has been off since 05.45 hours. I am writing this text while on generator. There are no banking facilities in Macha, and business loans are not readily available to people in tribal lands; to hardly anybody in Zambia actually. Heavy machinery and other production assets can only be bought in major towns, hundreds of kilometres away from our rural area. Fuel and other consumables are not readily available. Most supplies need 'imports' from other clusters of activities, like towns. Then transport is hardly available, and if it is, it is very expensive. So much for technology.

On the other side, the perils of the economic trouble in the world are hardly known to people in Macha; its effects noticed only when taking a long term view on the future, which is not a prime feature of the local culture. It is all going by as an iceberg in the far distance. An analogy is climate change: Africa is the region in which the impact of climate change on agriculture is predicted to be the most severe. Well, only a few in rural Africa know, do observe, and try to play part in preparing for what is to come. Hopefully rural Africa will become empowered to manage it all and be part of a solution.

About 20 per cent of sub-Saharan Africa's GDP is generated by agriculture. In many countries, agriculture is the main source of employment. Our next chiefdom, Chikanta, even with very poor infrastructure (no electricity or means of communications whatsoever) and further away from centres of activity than Macha, is renowned in Zambia for its production of maize. Yes, maize for sale too!

Unfortunately, food production in most of sub-Saharan Africa has not kept pace with the population increase over the past four decades. Lack of access to markets constitutes a binding constraint to the agricultural sector in most of the continent [Source: United Nations report "Trends in Sustainable Development, Africa Report 2008-2009"]. Previously, harvested maize produced the seeds for next year. Now, with hybrid seeds, that is not possible, so we need cash-in-hand to buy seed. One has to put aside all these gloomy pictures and press on..

So, today, people are again planting fields that were used by their ancestors, given by the chief to the family in the oral tradition of the land.

'When we are blessed with good rains, then we will harvest, and eat. Whatever happens with the electricity, heavy machinery, bank loans, buildings, and fuel, we will eat and live. Therefore we go early morning, digging and planting. And later in the season, weeding in the early mornings. We will eat,

understanding the works of our own hands, like our ancestors did.'

I look forward to innovations in the area of agriculture:

- * when we start planting oil crop for local and small scale production of bio-fuels, growing a diversified economy

- * when knowledge will emerge on new crops like sunflower and soya beans, indirectly stimulating crop rotation and thus the yield of the land

- * when we can supply for local production of healthy, High Energy Protein Supplement foods, especially for those affected with HIV.

It is about the 'human measure', the collective to understand and comprehend, to align with and preserve local culture. It is all about continuity of existence. Today people farm for their existence. We want to, and will be, part of it. Let's put our hands to the plough.

Internet in African Bush Changes Lives^{xi}

Internet is a powerful engine for development. Today it made another big impact in our family life.

The biggest impact of having full-time availability is in inspired lives, some examples:

* Esther Kalambo is now a certified pastor in the Brethren in Christ Church, after numbers of years of hard study 'at' a college in the USA: connected from her home in Macha. She did so while uninterruptedly serving patients in Macha Hospital and the rural community at large.

* Fred Mweetwa is well underway in his Bachelors studies at the University of South Africa. He does so from his tiny room in the Ark, while continuing to serve as an emerging leader in Rural Community Development.

* Jonathan Sitali is studying for a Masters in Public Health from his house in rural Macha, while continuing to serve as Medical Doctor at Macha Hospital.

* And in Mukinge, long time matron of Mukinge Hospital, Lynn Hacker, has commenced an online MBA study.

Most professionals I know in these rural areas are now studying online, or have plans to do so. This development in the minds and skills of local people will have lasting impact on society.

Everyday life of most professionals in Macha is now intertwined with the rest of the world. Sending and receiving e-mails is a continual routine; searching the Internet for answers too. Exchanges of pictures of medical cases to check with colleagues are nothing special anymore. We are all connected through Facebook and Instant Messaging, we post and discuss, and put Standard Operating Practices on Intranets. Local and online file servers, document servers, and application servers do their job, and Internet libraries are open 24 hours a day, 7 days a week. Some even buy cars in Japan, and all flight tickets and most hotel bookings are done online.

In Macha it is now news when the internet is down, not when it is up. It is like tap water, after its introduction, one only takes note when it is not flowing.

Of course, this is not applicable to everyone in Macha. In fact, most people are not yet connected to, or using, the Internet, just like many do not have running water or a mains power connection. However, Information and Communications Technology (ICT) are now available and accessible so that most professionals in the community are able to use this connectivity to communicate with family and friends and do online studies. Through peer-to-peer communication with others, the quality of work improves. One can even start thinking about 'efficiency' in rural Africa as personal effectiveness is enhanced. We now run between 4 and 10 Gb a day through the internet from this rural village. That is almost a DVD full of information flowing through this rural area, every day. It was only a few years ago that the sole means of communication was by weekly post batch or by radio, with data connectivity of 300 bits per second a few times per week.

Today, for our family, there was an apotheosis. At 17.30 hours, Merel sat behind her kindly donated, full size piano keyboard, glancing at the computer screen in front of her. Through the Internet connection she was able to hear and see what her teacher Kristin was saying and showing on her piano, over 15.000 kilometers and 8 hours time difference away. Diligently she played on the piano keys for the first time, keenly watched over by her teacher in her music studio in Lakeville, near Minneapolis, USA. Merel played "kitten are we, cute as can be, playing the keys, meow", and other rhymes.

We live as a family in rural Africa. This implies advantages and disadvantages for our children. I saw our daughter doing piano lessons today..... there are no words to describe how I felt. Wow, I thank God, technology, all involved, and anybody else! This is life to the fullest, which should be available for all on earth, also to those living in rural Africa.

Africa is Large^{xii}

On my way from Lusaka to London on a day flight, there was plenty of opportunity to see Africa. The flight took almost 10 hours, more than 7 of which were above Africa. It is the Gall-Peters projection that shows areas of equal size on the globe equally sized on the map, and see: Africa is really long!

When looking down, and thinking of the tens of hundreds of millions of people living there, it really dawned on me what a massive task there is ahead, if all are to participate and interact..

The ability of a community *to participate* after bringing Internet to a rural setting is significant. For instance, most interactions *beyond the horizon* only became available after Internet was introduced in Macha. Before that, such real time interactions were not possible.

So, off I go again, from summer to winter, from South to North, on a quest to assure attention for the plight of the people in rural Africa who need to be connected now!

Innovating and Learning versus Reporting^{xiii}

While I was sorting, packing, storing goods and resources which we have received from generous donors all around the world for specified empowerment projects in the rural community, I was contemplating on it all. The works in Macha evolved from a process of innovation and learning. **Local talents** were exposed, trained, mentored and supported in a process that was neither planned nor documented upfront. We are part of change 'on the fly', maybe even lagging behind in our understanding of what really is taking place in the wonderful progress we have witnessed. We have learned a lot, and now have an idea of how to be part of change, in a process that supports constant learning and action research.

While growing, all progress must be balanced with the often explicit and strictly implemented necessity of producing plans, contracts, reports and assessments. Basically, it keeps me glued to the computer, typing many pages of text a day. And it's not only me that is typing full-time at Macha. Counting, seven people are busy in administration: book keeping, accounting and reporting our activities in Zambia. Then Dick Uyttewaal and his Macha Works group in the Netherlands should be added to this at well. It is good to tell the story, and to share the lessons we have learned. And of course, the pendulum swings back and forth between control and freedom.

Having gone through significant growth of organisations and activities this year, the feeling lingers that there is great opportunity to innovate in the *value chain* of development aid. Also, there could be more attention for value creation – for instance showing the social return on investment - with encouragement of innovation and learning-by-doing, in a real time and fully connected environment.

This year I have become even more convinced that Information and Communications Technology is a key enabler for progress, especially in the rural areas of Africa.

Preservation of African culture, transformation for those without chances, and in general giving local talent the opportunity to develop themselves, all depend on 'being connected'. This, of course, is in both a figurative and technical sense. When connected, diversity is supported, as well as giving the opportunity to specialise and join in ventures.

The horizontal, holistic approach in Macha has shown that many specialist parties can work together, and that specialism in providing for connections and flow of information - by means of the internet - between parties in rural Africa, is possible, even from a base in rural Africa. We have shown that after prioritising the elements of (i) connection of rural communities and (ii) training **local talent**, we can deliver tailor-made community-driven solutions, adding value to, and engendering, partnerships with expert organizations. Although heavily challenged by 'in vogue' bureaucratic approaches, we must support learning, innovations, and entrepreneurship instead of overly focusing on reporting. It is quite frustrating to live in rural Africa and to spend much time on writing reports instead of being 'out there' doing the job. One just wonders where all those reports go, and if spending so much time on such work is 'all worth it'. Of course, full transparency and accountability is imperative. It must lead to tangible participation in the work at hand, though, and not on 'reports to fill filing cabinets'.

Being connected, to work in a fully connected way, and reporting on the fly - multifaceted and real time is imperative. Showing focus on those things that 'make the difference' for the local community, well tuned in a holistic setting, building upon national and international relationships, from a solid and leading base 'in the South' - that is the way we have gone and will continue to go.

Living at Altitude^{xiv}

At Macha we live about 1,100 meters above sea level. Much of Southern Africa is more or less on a plateau, and it often feels like that reflects our life. Our time could hardly be more full, with events and experiences: it is life to the fullest! Some of the 'news items' of the past four weeks:

I drove about 6,000 kilometers in three weeks, through Zambia, Zimbabwe and South Africa. Most of the time we pulled our trailer along, with goods from Zambia to Zimbabwe and again loading up in South Africa. It was great to see many of our friends in these countries, and we stayed in their houses, or camped in their driveways.

We found our team in Zimbabwe well-g geared for coping in their specific circumstances. Together with the local community, lots of effort is put into improving the facilities in their rural area. Their efforts are commendable, and requests for support by the local governmental office of Social Welfare, and the rural hospital are being accommodated to the best of capabilities. We are grateful for this collaborative effort.

All this driving around is now possible since our new car is operational. We received the number plates and assembled all paperwork - including registration papers, insurance, Interpol clearance, driver license validation, yellow card, letters of authority, and road taxes - just three days before commencing the long journey. During this time we also had room for relaxing (our summer holiday) with family visits to Pilanusberg (RSA) and the Vumba (Zimbabwe). During our travels we had local talent from Zambia and Zimbabwe joining, giving them a needed break and new experiences. All in all we have driven more than 10,000 kilometres since the donated car arrived in Macha late last year.

Just before New Year, large funding hit the accounts of Macha Works, allowing us to cover all current activities and debts. It is wonderful to enter the new year with a clean sheet,

and to facilitate the flush of activities that we expect to happen. The new year started with every **local talent** geared towards planning and administration.

We started the new year professionally by separating units with different business models, so as to facilitate specialisation, coordination, and growth. 'Macha Works' is overarching the activities in a coordination role, assessing local plans and reports. It is exiting to see the maturity of the team of local talent, and how they relish the opportunities ahead.

I had an opportunity to catch up on some reading. 'The Shack' is a bestseller in South Africa and served as a cup of fresh water, I enjoyed the read.

The year also started with many hours in the air, facilitated by Flying Mission. Pilot Rick Rempel settled in Macha with his wife Tracey, in housing graciously provided by Macha Hospital. And Macha now has its own resident aeroplane, a Cessna 210, allowing us to travel at speeds over 150 knots an hour!

Miracles and progress abound. With its connectivity, quality primary education, and abilities in transport, Macha has become attractive for international coordination activities. Mennonite Central Committee Southern Africa coordinators are settling in Macha for their work in co-ordination of MCC travels in Southern Africa.

More co-operation efforts are being established, with joint activities within the setting of the Global Research Alliance. Applied research in rural internet connectivity is on the agenda, and grant proposals, white papers, and the like are being penned. Currently the co-operation includes research partners in Finland, Germany, South Africa and Netherlands. Even contacts with Australia are growing.

In the meantime we continue to grow our knowledge base of rural areas, and, in that search, I continued discussions in Lusaka, touched down in Loloma, and visited Chitokoloki (near Angola) last week.

It is high time that the Tonga Hut in our garden is repaired. The grass roof caved in one year ago, but we did not work on it as all other projects were of higher priority. Good rains this year resulted in a full roof-collapse, so there was no escape from really get going with this repair. Now the grass is being laid on a new wooden frame, and we look forward to its completion.

The electricity company ZESCO finally began to deliver on its commitment to connect Ubuntu Campus with an 11 kV line. It was 11 months ago that we paid the contract, and only now can we see something happening, with three quarters of the poles standing. Let's hope that we see some more progress in this work, which will be a big relief - a support for the activities there.

Resource alleviation collateral^{xv}

Special observations can be made in an environment where resources are being added in an environment of poverty. When resources appear, a situation with *nothing* changes to *something*. Then there is a significant amount of new stress added to the scene: the stress of resource allocation.

Poverty - which is the shortage of common things such as food, clothing, shelter and safe drinking water, all of which determine quality of life - influences everything. Rural Africa also has major shortages in electricity, transport, communications, housing, finances, education, and health care, to mention a few. When such resources become available, the few with access to those things often pay a high price, both financially and otherwise.

One has to get used to the availability of the resource when it is just emerging. Complexity is added when the resource is shared, and it all becomes even more complex when it is shared across cultural or age boundaries. Often those with access to the resource harbour implicit or even explicit distrust of the ones with whom the resource is shared. Resource limitations feed distrust that the other is misusing the resource.

Resource allocation, which is the assignment of the available resource, is mostly defined - and organised - in a rational way. The challenge is in blending 'resource allocation' in the relational, rural African cultural way. In such an environment, resources are shared and catered for quite differently, with responsibilities valued more highly than rights.

Currently we are fortifying the scaffolding for the works at Macha, using Zambian management and international volunteers. When that scaffolding is gone, wholesome and culturally adapt resources are environmentally sound and sustainably embedded and available. Scaffolding goes with rules and requirements, which go with expectations. Guilt,

shame, and judgment follow, and thus hurt, especially in cross-cultural environments with wide varieties of people and expectations. Management in poverty situations often means management of hurt.

What must guide resource allocation in resource-limited environments is the engendering of trust across cultural lines, turning expectations based on regulations to expectations based on relationships - all tests of character.

Excruciating costs of Internet in rural Africa^{xvi}

Looking at budgets for operations in rural Africa, the costs of Internet bandwidth are major and excruciating. (Strangely, it seems to be one of the least known or understood hurdles for development.) It is difficult to stomach that we pay thousands of USD per month for internet connections with speeds that the West considers ‘peanuts’. In the West one gets 1 Mb/s connectivity wholesale for less than USD 20 per month. For us in landlocked Africa, such connection costs wholesale between USD 3,000 and USD 4,500. For lesser speeds and shared connections, significantly higher prices are calculated. Basically, we in rural Africa pay thousands of times more for Internet connectivity than one pays in the West.

There are not too many websites that mention this situation. In reviewing pricing of satellite capacity, like-for-like comparisons are almost impossible. When preparing for Macha over six years ago, I spend one year studying pricing and service options before being able to make an informed decision. Cost/benefit ratios are hidden in the plethora of price/offers and quick overviews do not show the multiple issues involved. In the meantime, the situation on satellite capacity pricing and availability has significantly deteriorated. For instance, since 1st January 2009 our prices have gone up at least 10%.

There is some movement in the situation. Major institutions and companies show interest, and sea cables are emerging. There will be a learning curve, and there is a lot to learn about the way Africa works so it remains to be seen what will really emerge.

The world must recognize the current role it plays in keeping Africa in darkness. Current high prices for access to satellite technology, crucial for Africans to connect to the Internet, are really problematic. Of course, with economic principles, capacity constraints lead to higher prices. But, as we at Macha Works are showing, real and major social benefits, and

growing demand for special user groups do occur. A breakthrough, most probably through more providers provisioning capacity over Africa, must emerge, with prices going down instead of the current rise of prices.

Greet and Smile^{xvii}

The penguins in the Madagascar movie got it almost right! "Smile and Wave" is actually in Africa "Greet and Smile". Again this morning, while moving to and fro to bring the children to school, I met lots of people walking and on bicycles. With each one, greetings were exchanged, and I was greeted with kind words and a smile. How nice to start the day with good words, recognition of each other's existence, and broad smiles!

Heeding Calling^{xviii}

Often I am asked: "Why do you live in rural Africa". This is in the context of having the option of living somewhere else, for instance in the West. This is the big WHY question. The answer is: *I live where I sense my calling to be: I am living in my purpose.*

Purpose is the driver. Without purpose, what do we do? I believe we all have a purpose, so it is important to know that purpose. We are all unique, and thus have a unique purpose. Taking it to the extreme: competition signals that possibly one is doing the wrong thing (activity), is in the wrong area (location), or in the wrong season (time period).

When working in line with *the purpose and calling*, one can be effective, and make sense of it all. It provides a strong inner drive towards action, whatever the circumstances.

Organisations exist to provide for an environment where people are together to combine their individual purposes in order to bring about a common *purpose*. It might need metaphysical or religious experiences to know one's purpose, and were one fit into the international community. This is valid for people all over, both the South and the West. In the West, where individuality is a driving force, the common purpose will unite people. In the South, where people's individuality is an expression of the common purpose, it starts the other way around, but all with the same result.

How does one find the *purpose* governing one's life? There are many books in the subject and much motivational literature. I found Rick Warren's 'Purpose Driven Life' interesting; also Reuel Khoza's 'Let Africa Lead'. A good talk among friends, time for introspection and needs-assessment, contemplation and prayer in the fields of what one hopes for, what one has faith for, might lead somewhere. In any case, it is often a process of seeking and finding.

Calling will give the energy to stick it out, to keep going when the going gets tough, energy for breakthrough when there are obstacles. *Calling* will help to stand up for what is right, to shed inhibitions and ignite a person to be more than a conqueror. It also helps to live unhidden, wherever and whenever. It guides the environment - including one's family and friends - with a basis for understanding otherwise difficult-to-understand actions and one's perseverance.

Purpose will give reason to connect. It births optimistic action. Optimism gives energy. Negativism drains energy, so let's steer away from that.

Calling will allow dreams to be dreamed. It can provide a sense of excitement, testing and siphoning of burdens. It provides hope and develops faith. It allows growth: entry into the impossible.

Knowing one's *calling* is a prerequisite for engendering change, both internal and external. I have the privilege of living in a fast-changing and challenging environment. Heeding to my *calling* is one of the reasons why I live in rural Africa and not anywhere else.

A Triangle of Partnerships^{xix}

It dawns upon me how a triangle of relationships can support us in rural Southern Africa. In that *vision*, the Western World, South Africa and Southern Africa network and relate together for progress and development. One can be seen to benefit all corners of the triangle!

1) Southern Africa can execute indigenous ways of developing, which include breeding new developments from within existing communities in an culturally adapt manner;

2) South Africa can support neighbouring communities with resources and understanding of the African environment, being able to build and facilitate bridges between first and third world environments, relational and rational environments, and horizontal and vertical development approaches.

3) The Western World can support in culturally aligned development; visit African settings in an appropriate manner and report on progress in a western fashion.

Recognised issues of the availability of empowered local leadership, holistic/horizontal approaches in aspects of health (hiv/aids), education, and communities, play pivotal roles. Cross-pollination of all parties by building multi-cultural (electronic) community exchange of mature concepts and ideas between the corners of the triangle grows mutual respect and understanding.

This all with a focus on Getting It Done.

Africa and the development world has seen many meetings, conferences, and other well-meant discussions passing, without them leading to sustainable actions and progress. Now we can build upon a number of positive, existing projects that are alive and kicking today, often built up in adverse circumstances, having stood the test of time and often well regarded in their respective communities.

Currently we witness a unique time of opportunities:

A) South Africa can show an impressive list of practical work done in township and rural communities over a period of many decennia. Such has been done using indigenous South African resources, often aided by funding from overseas donors over an extended period of time.

B) An array of relationships have been developed and are developing, with great potential for further growth. These relationships involve both those focused on using resources to get the job done, and those with focus on including and empowering others to get the job done, which often are the people in the areas of development themselves.

Developments in Macha, in the rural area of Southern Province in Zambia, have been of interest to national and foreign visitors. Zambia's Vice-President opened the Vision Community Centre that boasted over 10 inter-dependent units, acting as an innovation hub in the rural area. Infrastructure development of transport, communications, and energy are tackled in a manner empowering all in the local rural community, and supporting multiplication and growth beyond the rural Macha area. It is recognized by national government and the regulator. One of the projects, LinkNet – empowering rural communities (including health and education institutions) by building and maintaining internet service - has branched out to other rural communities. A change process is described and a large and growing multi-faceted array of partners is being established.

In the West a conglomerate of institutions and private individuals recognise the unique situation at Macha. Social venturing investments are being made cautiously, with donor organizations empowering projects to grow beyond their current status. *Ironically, these were most often implemented without institutional donor funding.* Professional organizations in the West and in South Africa are becoming aware of their own capabilities and resourcefulness for supporting

developments in Africa, as they strive for global social responsibility and study the emerging markets.

All these developments are more and more supported by visionary, holistic, and inspired leadership at grassroots and national level, as it strives for culturally appropriate management of programmes, projects and resources. With the further emergence of transport, communication possibilities and resources at all corners of the triangle, new ways of interaction and cross-pollination of leadership is emerging.

It needs to be recognised that change in the developed world will emerge mainly from urban areas, whilst, in the (Southern) African setting, real, enshrined change can emanate from rural areas. Thus activity on several levels must take place.

First of all, at grass root level, projects need to show feasibility and sustainability, as defined from an African perspective. Concepts and activities such as those seen in Macha and (sub urban) South Africa must be guarded, nurtured and multiplied, going from 'proof of concept' via 'proof of reproduction' to 'proof of production'.

In all corners of the triangle there is a growing understanding that current mechanisms of funding often do not align with realities at grassroots level. African knowledge and growing understanding of the value of cultural diversity must lead to consideration of proposals for trust-based funding schemes, including output target funding.

Reviewing actual and sustainable projects established on the ground in Zambia and South Africa will show feasibility of a new approach, closely guided by experts from many nations. Existing and new relationships will act in benchmarking and active monitoring of the program and projects, taking into account ethical and managerial frameworks.

Applied and fundamental research is encouraged in further understanding the ethical and African paradigms, cultural ingredients, and the actual physics needed in African (rural) environments.

Ideas on involving grassroots levels in Africa^{xx}

Reflecting on my writing 'An Inclusive World', on the inclusion and empowerment of African engineers in the worldwide developments, the content of which published in IEEE GOLDRush magazine last year, a lot of developments have taken place. Unfortunately, though, a lot have not. After writing nice words and witnessing nodding heads in agreement, we run the risk of celebrating words and avoiding the sweat that action brings. As the proof is in the eating, we continue getting our hands out of the sleeves, and take action.

Meetings on the needs in Africa are mostly done in convenient settings in the West. It might also be helpful, in fact even more effective, to get out here. Meetings targeting rural development should try to be done in the rural areas themselves. Participants will be exposed to new experiences and issues, and only then is one able to see and understand at a different level. It also helps in sustainability, as relationships are built and deposits in the relationship accounts are made.

Let us think outside of the box. The issues are real. Sustainable progress activities in disadvantaged places can be pinpointed. It is also time for (social) venturing onto new roads. This can be done with more co-operation across expertise, geographical and cultural lines. As an example, see the list of partnerships at Macha, growing by the day. Partnerships are productive when we accumulate knowledge and understanding in a continuously accelerated manner. Actually, for the first time ever, we are really able to partner because we are connected! We embrace the challenges, agree that change is a constant, and seek to establish and maintain new equilibrium.

Africa's intelligentsia, like engineers, can be involved (and get back to Africa!). It would be great to assess how many resources for projects in Africa are actually remaining in the

West. Donor Syndrome can be countered by engendering and soliciting innovative proposals from Africa. We need to think from an African user perspective and might need to find ways to empower users. And African providers must gain access to wholesale pricing. Social venturing is a good vehicle to assure that benefits of enterprise are ploughed back into the communities.

The current trend is: think big. However, grassroots level has a voice and is empowered to test ideas. Connected communities explore ideas, and report findings. Initiatives are starting at grassroots levels, and ideas on solving issues at hand should be valued and allowed to be explored. Ways of interacting between the grassroots level and big, institutionalised bodies can be found, certainly nowadays, with the development of connectivity and the Internet. Maybe the definition of Internet's NET4.0 could come from grassroots level in Africa? The social networks for grassroots- level interaction, utilising the multitude of technologies and possibilities available, are empowering interaction across geographical and cultural divides.

Oral Communications Culture^{xxi}

The last few days I have worked with many local individuals and teams on documentation. One realises in rural Africa what oral communication culture means. In such culture, information is processed differently from those cultures which have had the opportunity of many years of education and are part of a 'book culture'.

One who reads widely, and has paper and pens in abundance, can easily assume that others receive information in the same way. Wrong! It cannot be assumed that one can work with rural Africa using the methods that are predominantly in writing, through literature, books, and abstract papers.

Elements which are essentially oral communication methods are to be included in all that we do. Thus there are significant gaps to bridge, new avenues to explore. It is exciting to bridge cultures using new styles of web communication; for instance, in preserving African culture. Actually, that is a crucial aspect of my daily activities in Macha. In the plethora of activities, dedication to preserving the African heritage is a pre-requisite, and needs energy and dedication, certainly in our cross-cultural and cross-technological environments.

What may work well for a professional in the West may not be very accessible to people in Africa. Lectures, books, and other traditional western methods do not work well with the people I live with. Actually, interactive communications via the Web are arguably often much nearer to oral communication than printed literature.

Of course, what you see - what you think you see - influences how you act. Living in an environment different than the one a person grew up in is something 'to get used to'. Especially for me, living in an oral communications environment, so radically different than the culture I grew up in, needs lots of time for contemplation and study of the culture. One has to be able to see reality from the perspectives of the local person, the

common perspective, as defined by the prevailing culture in the area. And that understanding is mostly available in oral communications format, with emphasis on stories.

So I wrote.

Integral International Development^{xxii}

We are blessed by many researchers and bright minds visiting Macha. Here one's precepts and ideas are tested and scrutinised, allowing for continuous progress in conceptualising and lines-of-thought. All-in-all it becomes clear that the holistic approach at Macha can provide input into discussions on how to participate in sustainable progress, especially by people coming from other cultures with a wish to aid progress.

Volunteer researcher Jasper Bets came up with some tantalising observations. He noted the need for 3rd Culture perspectives in travellers, which allows someone to be perceptive and effective within the local value system. That way, bridges are built for both developed and under-developed countries to learn from each other.

In Macha, an integral perspective is being implemented, with activities set up horizontally instead of vertically and with simultaneous investments in many different fields. This vitalises and enforces each one, sustaining the inter-dependence of structures and systems. Such is done in an environment of trust and respect, developing from integration with the local community. Leaders are *creating space* for change to emerge, instilled by a long term view on progress. In such a setting, one guides and operates from the sidelines instead of directing by telling colleagues what needs to be done. This allows for local talent to stand up and for local initiatives to be fostered.

Proper respect for the local environment necessitates aligning one's life with local life conditions, valuing relationships, showing commitment, living in the 'here and now', synchronising resource availability with seasons, recognising - and submitting to - local authorities, and aligning with world views. This supports the kind of sustainability that the local community will embrace, own, and operate in.

It is great that these kinds of thoughts and ideas can be tested, scrutinised and discussed. It is wonderful to live in today's world, where we can share, expose, and interact realistically through the internet, in our search for, discussion and communication of, an effective way of living and working together in a global community.

Visitors^{xxiii}

In recent years we have gladly welcomed a multitude of visitors to the works at Macha. Some came with an explicit agenda to 'smell the scent' and to learn. Others came to help for periods of a week, several months, or even years. The *effectiveness* of these helpers is the subject of this writing.

Seeing short term helpers come and go, it becomes interesting to attain a view on the effectiveness of this activity. Some have come and worked but their work evaporated when they went or shortly after. Others came and worked, and their legacy continues to exist and bloom. This stark difference in sustainment, I think, can be linked to the mindset, the attitude of the helper from the outset.

It seems that generally it is the work of those coming with a servant heart that has remained. Those whose motive was to edify the local community, to serve wholeheartedly, have been most effective. They focused on being a blessing and did not focus on bringing home a good report or on pleasing others outside of the local community.

Many made silent sacrifices to be able to come, put the needs of the local community first, and accepted all the arrangements made by the local community. They did not ask anything in return, and their names are still known. They earned the love and respect of the local community. These ones truly influenced lives in rural Macha.

Those who came with an attitude of 'knowing what to do' had limited effect. Those who asked what others could do for them have gone, and their works with them.

Broken Bicycle Seats^{xxiv}

Things break. This is well known. But the rate at which things break in rural Africa is hard to comprehend.

This morning I noticed that only one seat of our six bicycles is not broken: the seat on Elmo's bicycle. That one we replaced with a new one last week. My bicycle seat is broken, Janneke's bicycle seat is broken, Merel's bicycle seat is broken, Beauty's bicycle seat is broken, and the guest bicycle seat is broken too.

We were taking files off a laptop this morning, as the screen is faulty. We will continue using the laptop with an external display, if we can find a working one! And I struggle to keep a back up for my data, as three hard disks bigger than 500 Gb broke within one year. Now there is only one left - with all my data on it.

Rural Africa is harsh on stuff. Stuff we get from the West that normally lasts there, breaks here at an unimaginable rate. Stuff that we buy in the South, often cheaply made, breaks even faster.

All in all, in rural Africa it is not really about implementing. That is just one step, a start. No, it is all about maintenance.

How DO you?^{xxv}

What *do* you do?

This is often the first question asked by people from the west. It tends to be part of a line of questioning which goes like this:

- * What do you do?
- * What do people say about you?
- * What do you have?

Answers to these questions supposedly lead towards assessment, subsequently to direct the measure of commitment of the association. Thus challenged, I diligently write reports - both formal and informal - answering that question for many audiences. And still I will have to write many others, as the hunger for answers to this question is huge. Hence Twitter.

Fortunately, I am privileged to sit in a hotel room in Cape Town, taking time off while Janneke attends high level HIV-related conferences in this remarkable city. Intentionally, I take time to reflect on what I do.

I could say that I wander around rural African lands, champion the poor, provoke people, and implicitly and explicitly call the international community to account. However, upon reflection, all this vanishes in light of the question

Who *are* you?

I am grateful for being in Africa, where the question, Who are you? is the most important question and the core of every inter-personal interaction. The answer fuels collaboration and inspiration and guides groups of rag-tag and seasoned visionaries, dreamers, and hands-on load-carriers to implement its consequences into every day living. It fuels the doing.

Well, who *am* I?

The answer needs study, interaction, and, of course, is multi-dimensional and being discovered daily. However, it

incorporates aspects of 'a broken person, crushed by seeing the consequences of death through AIDS and other poverty-related diseases, the profound pain and struggles of the uphill battle for sustainable progress by the poor, and, the many other extreme challenges that disempowered communities of this world face'. It also contains 'a person, inspired by the vision for empowerment of those in disease-ridden communities, awed by the magnificence and strength of the poor, who has chosen to believe that, together, we can seize opportunities that our amazing world provides, to build bridges between cultures and circumstance over which we can interact and support one another'.

So, what do I *do*?

I am aiming to build relationships and communities, trying to conquer the challenges of *relating*. I recognise that programs, platforms, projects and meetings are instrumental only, part of the arsenal of means to. I seek solutions and innovations that are more complex and less rational than our mainstream Western worldview seemingly dictates.

All in all, let us *be* before we *do*.

I am, because You are^{xxvi}

Is it possible that people in rural areas of Africa can connect with people in urban areas around the world?

That one can walk into a scene and meet someone who walks into the same scene, even if it is geographically separated?

That we explore and connect rural and urban worlds worldwide without anyone being forced into cultural suicide?

That we meet around the globe and relate, embrace, love, and build meaningful relationships?

That we find ways to be of significance and support to each other and together shuffle poverty and disease into the abyss?

That we encourage each other to withstand drunkenness and drugs, bullying, self harm, and greed?

That we share spiritual nutrition to deal with wealth, loss, alienation and pain in this generation?

That we unite through social networks, overcoming divides and separations?

That we share ancient, tested, and new resources, opportunities, visions, and dreams that lead to knowledge, understanding and wisdom?

That we collaborate to discuss, and engineer tools, taking into account the integral health of all systems?

That together, South and North, build capacity, mutual accountability, and progress, for justice and fairness?

That I am, because You are?

Nomad-ness^{xxvii}

These past weeks I have been travelling 'in the West'. Our family spent a week in Essex, UK, with Janneke's sister Ada and her family. Although Ada was in severe pain due to cancer, we had a good week in beautiful surroundings. Then one week in the Netherlands, followed by urgent travel back to UK for the untimely death and burial of Ada. Then back in the Netherlands again, spending time with family and friends, to return to Africa at the end of last week.

All this now finds me with a true sense of being a 'nomad'. Nomadic people (or 'nomads') is defined as communities of people who move from one place to another, rather than settling permanently in one location. There are three kinds of traditional nomads defined:

- * hunter-gatherers moving between hunting grounds
- * pastoral nomads moving between pastures
- * peripatetic nomads moving between customers.

Apparently there are an estimated 30-40 million nomads in the world. It is said that many cultures have traditionally been nomadic, but traditional nomadic behavior is increasingly rare in industrialised countries.

Well, I think the number of 'nomads' is growing again. We have 'third culture kids'; actually whole groups of people living somewhere else than where they were born, or staying a couple of years, or even living with such great change that basically they did stay, but the environment moves. All these are nomads!

I am a nomad, and my home is where my head rests. Eh... where can it rest?

Sustainability^{xxviii}

The question 'Is it sustainable?' is a leading question in inter-institutional and inter-personal interactions. It is the main denominator for 'go/no go' decisions. The capacity to be sustained is an important key as we aim for sustainable progress.

Wikipedia states: *Sustainable development is a pattern of resource use that aims to meet human needs while preserving the environment so that these needs can be met not only in the present, but also for future generations.*

I find it rather amazing that the primary measuring stick, seemingly applied unchallenged, is *economics*. The information in business cases, financial overviews, and economic assessments should be showing whether or not an intervention is sustainable. Although I do not mean to diminish the enabling capacity of finance, and financial information has its value, is it healthy to critique the rather predominant outlook towards the assessment of sustainability by means of the economics only? What if the economics - like engineering feats in water, power, transport, and communications - are mainly providing measurements of an enabling factor? What would it be enabling?

In my view, it is the rural African context - the inter-related conditions in which something exists or occurs with its cultural, social, historical data, intertwined with spiritual and other non-tangibles - that should actually lead to the assessment of sustainability.

In the progress experienced in Macha, most significant to me, are the many changed lives. **Local talent** in driving seats are now enabled and recognised drivers of progress. Whether or not the vehicle itself goes forward or disintegrates, this **local talent** has developed capacity to remain drivers of progress. And therein is the capacity to sustain: in people. I propose it is the inspiration, the fanning of hope, the embrace of lasting

relationships, explicitly positioned within existing context, and timely enabled, that are the main motivators for change. With African culture being preserved, maybe even strengthened, as it is being watched, discussed, and exercised, I reckon this to be the most valuable of inputs in assessment for the sustainability of it all.

African context is not readily understood, and certainly its complexity can hardly be grasped in elevator pitches, or short essays in language and concepts developed in the context of western pre-suppositions, history, and agendas. I think that economics, with its disregard for the established, functioning systems of African ways of dealing with funds, has led to a system of cross-cultural interaction that is out of touch with basic cultural priorities.

So we search for contextual indicators which show that roots have developed and the tree is well positioned. We are all striving to establish *the capacity to sustain*, though its proof seems to elude us. Paradoxically, one seems only to be able to prove when it does not exist. Afterwards, ofcourse, a verdict can be reached. Sustainability needs to be carefully analysed, taking the whole context into account. Without such careful analyses, with narrow definitions, personal or institutional whims can surface with arbitrary, erroneous interpretations.

Sustainability assessment is an activity of both science and art, and inter-disciplinary from the outset. It necessitates dedication and the search for cross-cultural expressions and co-operation. And such activity also deals with norms and values, whether implicit or explicit. We need to discover and employ more holistic principles that can bring true assessment and guarding of sustainability.

The one-billion dollar question^{xxix}

This morning, while cycling up a hill from bringing the children to school, a whole choir of children stood at a distance, screaming, 'How are you?' at the top of their voices. While yelling back, 'I am fine!', it struck me that they aired the one-billion dollar question.

Yesterday Janneke van Dijk published a study on 'Barriers to the care of HIV-infected children in rural Zambia'. Talking through the internet, a friend shared a diagnosis of cancer. And we filed a conference paper on 'Rural Mesh Network Implementation in the village of Macha' showing lots of real-world constraints for implementing information and communications technologies in an emerging region.

Why?

Well, it seems we have a desire to partner with those saying, 'I am not fine!', when they are asked that same one-billion dollar question. And that is worthwhile in itself: serving those who suffer. And sufferers abound, both in the South and in the North. We are all poor - in one way or the other - and fall short of being good.

Today I speak in Macha to a group of people about looking at realities, away from well worn paths, other paradigms and hypotheses. I will discuss the following:

- * Competition versus Collective and Individual Purposes
- * 'Tit-for-tat' versus Satisfying Needs.
- * Shortage versus Abundance.
- * Ownership versus Stewardship.
- * Hoarding versus Sharing.
- * Selfishness versus Collectiveness.
- * Losers versus Conquerers.
- * Loss and Waste versus Sustainability.
- * Truth being Paradigm versus Truth being Relationship.
- * Authority derived from Power versus Power derived from Authority.

Challenging subjects to talk about in rural Africa. Seemly it is all about the former while striving for the latter.

I am fine!

The Art of Living^{xxx}

These are fascinating times! Quite scary too, now information is growing at an explosive rate. How shall we cope with all that? And how to validate? Again, it is fascinating to access so much of what is happening, with all information at one's fingertips, everywhere (eh, almost), all the time, for everyone (eh, almost). I feel fortunate to be based here in rural Africa, observing from a vantage point of relative distance, while profoundly feeling impact.

With our organisations growing and maturing, we enter new areas, possibly new arenas. It is obvious that the scare of the uncertain remains the same. Only the stakes seem different and the way these uncertainties are being addressed seemingly changes. For certain, big organisations have big inefficiencies, often seen in overheads and arm-wrestling. Small organisations have big inefficiencies too, seen in lack of scale and non-alignment of activities. In view of such inherent inefficiencies, it is amazing one sees any yield at all: a tribute to the greatness of entrepreneurship and action, wherever.

So many new and relevant questions come up, and they seem to come up within shorter intervals. Quite a number of them are utterly profound and existential. In whatever direction one looks there are these important questions popping up. For me, the most daunting remains the issue of the finiteness of existing models we base our societies upon. Although as corporate international community we still seem to shy away from the consequences, it seems obvious that the earth will not continue to sustain growth. Energy extraction, dumping of waste, growth of population, all put heavy strain on our current models of interaction.

It is all about the art of living, is it not? Life is about living., I gladly witness calls for more integration, harmonisation, and inter-disciplinary activities in research and development. There is still a lot to be added into that, as daily life in rural

Africa shows me time and time again. Weaving the issue of relationships into all we do is, in my view, essential. It is, and remains, about human beings and how *Homo sapiens* relate. Well-being - that is what it is about.

Just an example: it is said that the production of solar panels cost more energy than they yield over their technical usable life. However, if there would be no solar panels in the bush, the main source of energy in the bush would not be harvested. So producing solar cells can be seen as actually transporting energy spent at the production site - in an industrialised setting - to the user site - in a remote setting. Obviously, putting solar next to the production site is not done, but in the bush we cherish this relationship between industrialised and remote settings. We welcome the transport of some energy from the production site to the bush. So, reviewing: the relationships component becomes part of the sustainable energy discussion.

Yes, I am enthusiastic about the 'Macha Works Model', as a framework for (re)action valuing relationships. The model works on 'calling' first, 'commitment' second, and then come phases of 'looking', 'reacting', 'waiting', and 'interacting'. Although this takes time, it is wonderful to see that thus enshrined activities in the Macha area are there to stay. There is hardly any bankruptcy - thus no writing off of capital- and a continued and clear focus on sustainability and progress. The model inherently points towards Social Return On Investments.

What About The Children?^{xxx}

Often rural Africa is in survival mode:

- * surviving the HIV pandemic
- * staying alive in situations rife with malaria, TB and other diseases
- * in search of - and often having to fight for - education, water, transport, communications, energy, and financial services

All this is just to make ends meet, to make it through to the next day.

Alleviating interventions are mostly focused on adults, the responsive group.

We gratefully live alongside, joining in inspiring activities, participating in connecting the unconnected and more, so people can play a local role in the current global society. Success stories mainly feature adults, the vocal group.

What about the children?

By way of comparison, children in the West live in a world of possibilities and innovations. I witness young people visiting from the West in a state of shock when they experience our limited throughput on the Internet. They hardly comprehend life before we got connected, which was only few years ago.

When we set up camp in rural Africa there was no means of communicating. Most places I visit today still have neither Internet nor mobile phone networks. Children grow up in rural Africa unexposed, without comprehension of a connected world. This all goes way beyond generation gaps.

The New York Times states “If Your Kids Are Awake, They Are Most Probably On-line”. Continuing, “the average young American now spends practically every waking minute — except for the time in school — using a smart phone, computer, television or other electronic device” apparently more than seven and half hours per day. Around me here in rural Africa I do not know any kid that fits that description.

Yes, there is need for exposure and use of communications by children in their formative years. That is also true for Africa. African children and young people must be prepared for, and involved in, the information society and beyond. In Macha we are trying it. The primary-age rural example school, Macha Innovative Community School, has computer education from reception class. Now we are working on replication in other primary schools:

- * on-line chats on experiments and science lessons between rural secondary level school and western school

- * students from Zambian universities joining the Macha Works while in tertiary education.

These are our pebbles in the pond.

It is time to make **waves** for connecting the young in Africa, to build more and new bridges over widening divides, to be sure we can be together in the future.

Personal Ethics^{xxxii}

To be explicit on my stand in issues of ethics, I confirm my commitment to the following:

1. To be honest and ethical in all my communications.
2. To be faithful in my relationships.
3. To do nothing out of selfish ambition or conceit, but to look out for the interests of others.
4. To refuse to elicit, accept or pay any bribes, and to report those who do.
5. To be a diligent leader without being harsh, and to remunerate associates justly and fairly.
6. To be a peacemaker.
7. To approach my activities wholeheartedly.
8. To submit myself to just and ethical governing authorities.
9. To connect with the disenfranchised by investing generously and sacrificially in the broader community.
10. To collaborate with my peers to impact communities and nations.

Balancing Act^{xxxiii}

My current struggle with jet-lag is aggravated by efforts to balance the experiences at home in rural Africa with the experiences of life in more affluent USA and South Africa that I have witnessed in the last weeks. The environment in which the struggle for progress in rural Africa takes place seems worlds apart from the environment in which many affluent and leading people live their lives. It's an old dilemma, albeit changing face in our current world with abundant travels and communications.

Among other activities in San Francisco, I discussed ideas, experiences and possibly resource allocation for activities in Information and Communications Technology - ICT - in rural Africa, for the purposes of health, education and communities. Those discussions took place in situations of comparative luxury, with soft, easy comforts, quite removed from often awful conditions of the areas under review. Although gratefully experiencing pockets of true desire for participation, I could not help sensing the notion of general selfishness in the affluent society. Reviewing my interactions over the last weeks, it seems that true understanding of needs necessitates close and personal contact with the environment in which those needs surface. Those who have done so seem to deal quite differently from the ones who have not.

When looking around, one just wonders how current global economic processes could be sustainable. I read quite a number of reports on global warming, economic growth and the like, and they are not a happy read. My travels induced virtual flashbacks into my own previous luxurious life, full of ease and pleasure. Its trials and annoyances hardly compare with the difficulties, challenges, barriers, and trials that come people's way in the rural African environment.

Well, for now this all just does not balance.

Pre-conceived Ideas^{xxxiv}

Today I spend another day communicating (in various ways) the wonderful African environment, and how we work together to engender sustainable progress. In doing so, while anticipating the reception of the communication, I am wrapping my mind around the many components enshrined in contemporary thinking. Realities of rural Africa appear so much removed from the pre-conceptions of most recipients of my communications that the barriers to be overcome are often staggering.

Being separated by many thousands of kilometres and with few communications paths or sketchy personal experiences, the information an audience possesses about rural Africa is quite limited. This is easy to solve by supplying the facts. But the disposition that most audiences bring, with prejudices and biases about rural Africa, is more difficult to address. Years of negative mass-media messages, pictures of disasters, and stories of mismanagement, have taken their toll. It becomes even more complex when world views, frames of references, and personal perspectives are taken into account. And then there are the approach/methodology issues.. That is where the rubber hits the road - hard.

It appears that many people interested in rural Africa already have figured out 'solutions' based upon their perceptions, even before communications take place. One wonders what is being missed, what is not being noticed?

It is obvious that pre-conceived ideas play an influential role in the process of communications. They challenge what one sees as an important part of the Macha Works road map. With the distinct phase of 'looking', we challenge pre-conceived ideas that often come unconsciously and can deceive. In the meantime, communications serve to either change or strengthen existing thinking.

With a large rift between the contemporary pre-understanding and the actual situation in rural Africa, it is imperative, though daunting, to communicate well.

Community Dissemination^{xxxv}

The term 'community' is difficult to comprehend when seen solely through the lens of individuality. Community is the arena in which many of the significant requirements for working out issues that affect us all are being nurtured. People do not work in a vacuum; a person is often not the first one to puzzle over certain aspects or issues. We require the enrichment, endeavours, and assistance of our peers to check our perception and to affirm its validity. Likewise, our conclusions, if deemed correct, have importance for others.

Community is the first level that provides accountability; it offers the environment in which we can formulate our thoughts. This accountability guards against maverick and individualistic views. It provides a check against selfish and self-serving conclusions by those who lack the perspective to see beyond their own circumstances.

The term 'International Community' is even more difficult to comprehend, as it crosses all cultural boundaries and local interests. Ideally it incorporates both our African sense of community, where an individual is defined through the collective, and the more Western sense of community, where the collective is defined by the sum of individuals. Embedding of knowledge needs communities, as, in search of meaning, it will 'make sense' or 'ring true' to others when evidence to reach conclusions is openly assessed. Thus the need for an international community.

In Africa the term 'community' thrives tangibly. It is what makes the environment tick. It is where one exists, where one is regarded as a member and where one finds security. Now, with Internet, our rural African community expands innovatively. It is wonderful to see Facebook, Twitter and collaboration tools and apps being embraced in our community.

Now a most precious part of African Culture – community expressions – is augmenting the international community.

Visionary Drive^{xxxvi}

Engaging with people and institutions in resource-limited environments is engaging with groups of people in their collective decision-making process. This is in the group interactions, equally at local, regional, national, international, and various institutional levels, where the authorities (rights vested on the individual or a group of people) and formulation and application of policies, are being expressed and tested. Hence the necessity to spend significant time understanding the environment and its drivers, resulting in a rationale for behaviour and understanding of existing practices of governance.

To be able to sustainably interact, participate, and ultimately collaborate in resource-limited environments, one has to show one's colours, one's character. Of course, this is only possible in an atmosphere of respect for vested interests, while considering existing engagement processes, members and actors for the most appropriate setting under existing circumstances.

In my search for sustainable progress, I recognise that one's vision - the clear, distinctive and specific view on the future usually connected with advances in technology or social arrangements - is important to the engagement process. It is this vision that can transmit from one mind to another through speech, writing, behaviour, or other imitable phenomena. Taking the concept of memes, the units of cultural ideas thus transmitted are the devices utilised to expedite and affect favourable support in the collective decision-making.

Of course, this process can be tough and sometimes disheartening, especially in cross-cultural settings. However, when all is done in a humble, vulnerable way, it is not difficult to be inspired by expressions and interactions that are true, honourable, beautiful, and of value.

Lessons Learned^{xxxvii}

While thinking about the effectiveness of our formal training activities in the field of Information and Communications Technology (ICT) – or perhaps for any activity one focuses on - I observe that, in our rural African environment, a formal way of teaching seems less effective than an informal way of educating. This observation is being strengthened by observing the informal interaction of local talent on Social Networks on the Internet; for instance on Facebook, or specific Twitter hashtags.

I see technicians at LinkNet acquiring ICT skills and growing in stature at breath-taking speeds in line with the Macha Works Model in the predominantly informal setting of Macha Works. Conversely, they slow down considerably and lose drive when going through often costly and time-consuming formal training classes based on Western models. It becomes obvious that even acquisition of ICT skills in rural Africa can utilise the often well-honed observation capabilities of people.

After reading a number of scientific papers, I was inspired to assess the phenomenon of writing as a representation of speech. As this is an oral culture, it is obvious that communication through writing is often ineffective, possibly because it is an abstract representation of reality. I have learned that, in the rural African environment, thinking and conceptualising takes place in an existential way. This is quite different from the essentialistic thought patterns enshrined in the West. In our environment, comprehension does not come through deconstruction of the matter at hand in layers of reality. Comprehension comes through an assessment of the whole, and then in reviewing its relevance, integration and effect on groups of people in the community.

So it seems that practical skills are not necessarily acquired through impartation and absorption of abstract concepts. Actually, it seems that comprehension of such abstract facts

are more related to foreign concepts of certification and individual remuneration, while observational and participatory interaction seems to relate to skills development for actions resulting in betterment of the local community.

Technological realities are now predominantly communicated through writings and deconstruction of various components that build the whole. Of course, it is not an issue of either 'this' or 'that'. It appears crucial that a complementary, humanised expression of technology be developed.

Real sustainability of technology can be witnessed in practice when an all-encompassing description is recognised, described, and enshrined in the local language.

Developmental Spiral^{xxxviii}

The many interactions and connections we foster with scientists from within Africa and abroad, facilitated through our uniquely connected rural African environment, result in an interesting phenomenon. A scenario unfolds in which pre-understanding of our rural African context is being refined, based upon the continuous flow of information. This availability of data leads to new interpretations of the environment and its challenges. Consecutively innovative approaches emerge, gently leading towards appropriate and progressive interventions. This scenario appears to me as a developmental spiral.

The presentation of our scientific paper on 'Internet performance at Macha' yesterday at NSDR10 in San Francisco, resulted in valuable interactions with leading scientists and practitioners. Obviously it is all about the interpretation of what we witness. Due to our enshrined cultural diversity, I postulate that both the facts being witnessed, and the observers witnessing it are being challenged. This iterative process hones existing models and lead to new insights.

I wrote earlier about the influence of pre-understanding. It is quite clear that facts reported from our environment do also work within the recipient: in this case scientists. Pre-understanding in individual scientists and their collective is changing. Interestingly, querying the (same) data with this changed pre-understanding can yield further, possibly new, insights: enhanced understanding emerges. This is a spiral, not a circle, as it is a progressive and constructive process. Although neither the environment nor context are necessarily changing, observers grow in their ability to understand this environment and context in a new way as they study and interact with the information, over time.

Thus study and research facilitates our spiraling in the right direction. As the Macha Works Model is both the subject of

scrutiny and a facilitator of the same, research findings are bound to interact, refine and improve its tangible results.

Virtual Realities^{xxxix}

After another bout of globe-trotting, I am keenly aware of the various parallel existing and diverse realities.

While dwelling in rural Africa, it is difficult to contemplate a world where individual consumer demand is being satisfied with abundant and tuned availability, with shops that seem to stock everything, where food is in abundance, water – cold and warm – never stops running from multiple taps inside a home, where there is little dust, everything appears aligned and clean, a world where people cherish individuality before community, where money comes in plastic forms, or out of a wall, and where people are busy, have no time and appear to live in luxury and comfort. This seems virtual reality, only existing 'in stories'.

While dwelling in urban western settings, it is difficult to contemplate a world where basic commodities and resources are scarce and supply is erratic, activities are directed by weather and seasons, and markets offer more of the same, and time seemingly does not exist; where gathering of food and water is a daily struggle, where written texts are not seen, activities are set by communities whom defines the individual. This seems virtual reality, which only exists 'in stories'.

These are no virtual realities, but worthwhile existing and real existences. Thus the challenge is to augment the visual or oral experiences - either by text or multimedia, or speech – with sensory information, with immersion, and real interaction.

Internet needed in rural Africa^{x1}

It is nice to witness more and more leaders stating that Internet connectivity is urgently needed in developing worlds. UNESCO, Jeffrey Sachs, and many others join the choir that sings the benefits that Internet connectivity and bandwidth bring to Africa. This is a far cry from the 'why' question predominantly asked until recently. With the emergence of policies in the West that broadband Internet connectivity is a right for all its residents, it is good to now see the 'why Internet in Africa?' question fading away.

Also it is exciting to see that satellites are being launched and (sea)cables being floated to connect Africa. We are eagerly awaiting lower costs of bandwidth, as up to now we have not seen a decrease in pricing. We continue to pay well over USD 1,000 per month for a dedicated 128 kb/s connection. The ever-growing demand for bandwidth - even to be able to keep doing what we already do - effectively means the cost of service continues to rise.

The causes of the continued high prices of bandwidth are known: investors recuperate their investments first, urged to do so in these perilous times and unknown territories. It also becomes apparent that the costs of transporting 'the last mile' (or in our case the last hundred kilometers) is the next hurdle. Quotes for terrestrial connectivity between rural areas and the 'backbone' in urban areas are surreal, multiple times the cost of bringing the (international) bandwidth to that urban area. And thus a 1 Mb/s committed connection, costing less than USD 200 per year in London, still costs us more than USD 80,000 per year. Although we also need such bandwidth - actually much more, to satisfy the life-saving needs in our rural community - this kind of money is just inconceivable.

Further, all this does not take into account the investments in equipment, the cost of transport, and the cost of local staff performing operations and maintenance. We have witnessed

that current equipment raises major hurdles to perform in rural areas. Circumstantial facts often generate at least one major 'show stopper', making most equipment fail in a rural African environment.

I am glad that, with students of the University of Zambia and the Copperbelt University, and with collaborating applied research and expert partners from all over the world, we are venturing on the path of applied technology research. Through such longterm activities we will be able to sustain an inspirational role. It provides hope of real technological breakthroughs that can perform well in the rural African environments, and thus, in the long run, will facilitate the roll-out of Internet on this continent.

The Relationality Of It All^{xli}

On our journey towards progress and lasting partnerships, we often go through periods of monitoring and evaluation. These are important times, involving independent experts or peer-review. Positive remarks boost our energy, and constructive criticism helps us in focusing on areas for improvement.

Limitingly, monitoring and evaluation is mostly executed from a predominantly rational view point. It emanates from a predominantly western setting, where the relational tends to lean to the rational, where people follow the agreed-upon action. This is quite different from the reality in my rural area, where the rational tends to lean to the relational, where action emerges because people are together.

A western newspaper recently published a few lines on the importance of mutual respect in the context of issues encountered in the integration of different cultures in western societies. It was explained that 'respect' within collectivistic societies means one not always telling the truth. This is because the truth can hurt someone, and the feelings of someone are seen as more important than telling the truth.

This short monitoring and evaluation statement shows handling of truth singularly defined in light of rationality. In my view, *truth* fundamentally should be defined in the relational realm. For instance, even in view of the statement above, there is a difference between the (rational) truth and saying it. For instance, in a situation where telling the (rational) truth can hurt a relationship, the best course of action can be to delay mentioning it, and first build the relationship to be able to address the issue later. Such is quite feasible in respectful, open relationships, where questions are being asked carefully, people listen, and all are focused on holistically assessing both the relational and rational.

Integration of Cultures^{xlii}

Vindicated by experience in rural Africa, and glancing over world news, the message is clear: "Integration of cultures is floundering".

Within resource-abundant settings there is lots of documentation available for anyone interested in understanding what 'is'. Cultures, as they are, can be known. Now comes the challenge: understanding what is becoming. One does so by interacting with the existing information, setting up networks of relationships to facilitate this process. Basically one shares information and guards relationships.

In resource-limited settings, all this information is not available. No books, no newspapers, little Internet; and communication channels are just opening in privileged places. It is the past experience of cultural differences, so strongly felt during colonial times and often blamed for current inequities, that one must reckon with daily. It is by knowing history that members in rural community view current events, and contemplate the future. Such history is transmitted via oral means, within the given set of relationships. As private space is thus freely shared, the community views exchange of new and external information with apprehension.

In Macha I recognise the helpful existence of well-defined world views. This acts as third culture - a neutral ground - to which one travels from different cultures. Such world view, properly defined with its thought patterns and models, provides a space where individuals meet and information can be shared.

No doubt communications are instrumental. Living during current times of greatly expanding information networks - bridging gaps with cables, wireless signals, social networks, and other emerging means of communication - is very exciting. I am privileged to witness it all from an environment where its impact is reverberating through all aspects of community life.

Being Together^{xliii}

The notion of technology being external, and not relevant to one's personality, is shifting. For instance, one's interaction through technology on Social Networks is becoming recognised as part of one's (perceived) identity.

When deprived of technology, one is not able to build such identity, and thus one exists only partially. Facebook's recent picture depicting friendships worldwide, with Africa mostly void, is a striking example of showing those people that thus *exist*.

Reasoning from radical African communalism, one could provide a new answer to the dominant rational view on identity, that, for instance, an internet search of a person now shows. As an antidote to the growing distance between individuals stands the African traditional view that 'reality of the communal world takes preference over the reality of the individual life'. Many might heed to such, hence, I guess, growth of building communities on the Web.

In my view, researching technology within the realm of traditional African thought could open new ways of how we perceive, and then develop, technology. For instance, African socio-ethical ideals might provide answers to technology development that otherwise focus quite singularly on empowering the individual at the expense of the collective. Of course, such research would be conducted in a different manner, using inclusive, collaborative methods, with open source and non-competitive approaches.

Seeing the difficulties that ensue with the prevailing Western view, I would like to encourage the idea that technology could aim to unite people, facilitating Being Together.

Scientific Proof^{xliv}

From following conferences through Twitter Hashtags, with ICT possible while nestled in my rural African habitat, I notice many, sometimes rather desperate, calls for scientific proof of the impact of ICT implementations in (rural) Africa. Consensus seems to grow that it is not simple to prove the impact of complex intervention like bringing (ICT) infrastructure into new frontiers. There is little guidance on how to do it.

It is a matter of the realm within which one wants to define/prove impact. In a Western mindset scientist mostly aim to contribute to comprehensive mathematical models, preferably with conclusions in the realm of economics. Implicitly, those models focus on short-term effects and give clear guidance on risks. They do not necessarily cater for long-term effects, nor give clear guidance on uncertainties. Those models have a proven track record, working well under standard circumstances.

As there is still much less known of (rural) African realities, for modeling purposes these circumstances cannot yet be defined as standard. Effects of enshrined cultural focus on history, communities of people and inclusiveness, effects of infectious diseases, and dominance of closed societies, are most significant for long-term effects. So, of necessity, proof of impact in Africa starts with assessing long-term significance.

I witness in our rural area changed lives, spurs in local innovation, inspired communities and people that emerge as players prone to having long term effect in their world. How does one prove that? I suggest

- * by the registering and study of facts and stories of communities and individuals concerning the intervention,
- * evaluating their social consequences as seen from various stakeholders' distinct historical and society perspectives,

* and possibly, when circumstances can thus be modeled, in economic terms.

I consider myself privileged to work with many scientists and students in multiple disciplines, from Africa and the rest of the world, who dare to go into these uncharted, deep waters. Although we have come a long way, it feels like we are just starting. No wonder! Long-term assessments take long! As we aim for scientific proof in these varied cultural contexts, it is good to take time in assessing the results rather than to rely on elevator pitches only.

Strengthen Those That Drive Progress^{xlv}

The 20/60/20-rule talks about performance. This rule-of-thumb predicts that, within a community, 20% of people will show strong performance, 60% perform averagely, and 20% of the persons will show weak performance. Thus 20% drive forward, 60% coast, and 20% slow progress down.

As technology in essence amplifies human intent and capacity, it is imperative to focus on the first 20% group: empowering those who drive progress. Hence our focus on Local Talent, who by definition fall into that category. By supporting such persons one anticipates that the environment changes to 30/60/10, as average performers get inspired and energised, and weak performers improve.

When resources are limited, non-discriminatory roll-out of technology, including Information and Communications Technology, is not the way to go. One needs to carefully look at which communities show healthy and positive intentions, vision and real collaboration, with capable persons committed to their environment, then support that local vision with technology. In Macha it has been shown that this has contributed to rural communities and its people reaching their collective and individual potential.

Here and Now^{xlvi}

A 4.200 km, 13 day car-with-trailer round trip brought me from rural Zambia through rural Zimbabwe to South Africa and back again. We went as a family to meet and greet, and get supplies to the team at Murambinda Works in Zimbabwe. Now back home there remains a lingering amazement over the *time-factor*.

When travelling vast distances over single lane roads of varying quality, one appreciates distances. Covering 300 kilometres a day is a significant achievement. And when covering large distances with a family, while tenting as we go, to keep cost down, in challenging conditions - for instance 130 mm rainfall a day - one encounters many varied uncertainties.

We came back 3 days later than planned but here nobody minds or comments on it.

This experience combines with observations from **local talent** from rural areas that visited the West. They mentioned the time factor as one of the most powerful impressions they witnessed. In the West people keep time, with time seemingly superseding relationships. This is in direct contrast to rural Africa where relationships influences (keeping) time. They testify that, after witnessing these phenomena in person, they are able to understand the high pressure from people overseas. It did confuse them as it seems to interfere with relationship building.

It is good to travel, to be exposed. Again I experienced the particular challenges that people face in rural areas. And in coping, it boils down to how one experiences time. In view of the many challenges, and fragile availability of resources, it appears fundamentally difficult - almost impossible? - to say something definitive about the future. So it is best to focus on the present, the here-and-now. And that is where we all live.

Awe-struck, Jaw-dropping Wonder^{xlvii}

Today I saw a grandmother wheeling her handicapped grandson in a broken wheelchair through slush and mud to the Kids Club in the Care House. Purposefully.

I saw a list with tens of volunteers from the Macha community all declaring their willingness to assist in keeping the transitional care flowing, with nobody asking anything in return.

I went through the community and saw people palavering with other people, nodding, often with smiles on their faces.

I heard of equipment being blown up by lightning and electricity surges, and saw concerned engineers wondering how to help people who were without service.

I heard of ideas and plans for how to alleviate difficulties.

I heard the calls of exotic birds.

Whilst standing outside I heard the rain approaching.

I heard nice words spoken by many, and saw most people trying their level best to bring out the best in themselves to serve others.

I used four different computers linked to the Internet.

I communicated from the rural African bush with peers around the world via various means of media.

I saw a photographer taking pictures with a digital camera, documenting what is happening.

Wow, it is now lunch time, and we are not even halfway through this day. If newspapers would report all the positive news, they would be too thick to read!

Each day is worth living, a memory to cherish; a wonder.

Demand Driven Solutions^{xlviii}

Many well-intended solutions are showered benevolently upon the communities in which I roam. Upon implementation, these solutions often end up dormant and discarded. Although, from certain perspectives these solutions did seem to make sense, locally they have an extra-terrestrial ring to them. They are a tangible representation of the mismatch emerging from destructive prevailing dealings with 'the what', in contrast with local demands holistically expressed through 'the who'. It appears that often *stuff* (the what) is put into communities without thorough consideration of *people* (the who).

A prerequisite for a solution is a demand. Thus prerequisite for implementation of a solution is a satisfying answer to the question "Who is asking?". Without a real expression of local demand there is only shaky ground for implementation of local solutions. A person (or community) request is the necessary infrastructure over which solutions, including resource alleviations, can be rolled out. Possibly only those who ask - who express demand - have the initial capacity to recognise an intervention as a solution. When no-one expresses the local demand, no-one recognises the local solution.

A multi-dimensional balance is involved, including aspects like exposure, anticipation, communication, equality, relationship, freedom, and more. Also part of the mix is involvement of all stakeholders, leaders of the person (or community) asking, sustainable use and growth of existing resources, and strengthening of already existing capacity. Implementing solutions involves piecemeal expansion of the local resource base, aimed at growing capacity and capability; also in preparation for local demands and the local solutions that will inevitably follow.

Although time runs fast, it is still one-step-at-a-time, with cooperation, collaboration, in unity as we focus on (local) demand-driven solutions.

It's About People^{xlix}

It is all about People. We need to remind ourselves about that, constantly, and certainly before interacting. All the rest is subject to this notion.

People are the context for technology, change models, and subsequent investments. And dealing with people necessitates contemplation and apprehension, the assessment of the outset, its potential, and the capacity to reach it.

And all with humility, servitude - a pile of those desirable human attributes - oh yes.

People's voices are now being heard globally, and we are stunned by the sheer magnitude of differences in the world, by trauma experienced by so many on both sides of the equator; people dwelling in plenty virtually impotent in connecting with those living with so little. And a thin veneer between a smile and frightful discontent.

It is amazing what a great variety of cultural contexts exists in our global village. So much I hear and read in The West makes so much sense in The West, but makes *no(n)sense* in The South, and so much I hear and read in The South makes so much sense in The South, but makes *no(n)sense* in The West.

What to say and write when commuting between the two? Let's translate, build bridges, amend, augment, and transform. How to reach the potential? Appropriate technologies? Very much so! Exposure and guidance? Of course! All in context-appropriate ways, that is.

Thus the need for applied, transformational research: inquisitive, cross cultural, exciting research. The North filling the void for appropriate (rational?) technologies that fit the context and needs of people in The South; The South filling the void for appropriate (relational?) technologies that fit the context and needs of people in The North.

Living in a connecting world, with abilities to feel different worlds, can be discomforting. However, we are all people, and that is what it is all about.

Impact Indicators¹

Is an intervention worthwhile? What is its impact? Resounding questions often result in hefty debates when answers are being posed. Questions that demarcate real battle grounds, and rightly so.

For me, a world-dweller living in rural Africa, these questions are almost existential, providing the basis or justification for our very presence. They tend to lead to big boosts when agreement about the answer is found, or to stress, when answers are being challenged.

I have lists with indicators to watch and communicate. Their relevance is presumably based upon conclusive research, that proved causality with the higher goals set.

It is actually a daunting process to (have to) accept or (less often) set indicators! To be well-informed to do so, we follow much research on many subjects. I try to assess applicability and relevance of proposed indicators for specific activities to measure our performance on inspiration of people in rural communities to reach their collective and individual potential.

However, I have a lingering feeling of uneasiness about most indicators. Is it because the underlying process of deconstruction feels so foreign to the holistic nature of the rural African reality? Is it because underlying research seems to be done from desks in the North, from an expatriate subculture, or in locations conveniently near hotels or airports? Is it because it feels that indicators and goals seem more based upon priorities and supply from the North, than requests from the South? Or is it because they point to outcome only, not to process nor culture?

Progress, or impact, results from a process. They are not a product that can be purchased. A process must be experienced collectively, by all stakeholders involved simultaneously. Processes lead to change - from situation A to situation B. Most indicators are helpful in quantifying each of these

situations. However, they do not describe the process, nor the impact within a specific cultural environment, and thus do not necessarily give indication of local worth, nor value, or impact.

In the rural African setting *the process* within its specific *cultural setting* is most important, as it indicates the attainability and sustainability of the outcomes, and possibly replicability. So I propose indicators that, for instance measure

- *welcome of the change* by the majority of the community
- whether a large number of people has come to *support the change* within existing cultural realities wholeheartedly
- whether individual community members display explicit *comprehension of the change* and its benefits, and can testify about having a *hand in the change*.

Such, in my view, provide for real indication of worth and impact.

Cultural Bumps^{li}

I have seen quite a number of international people leaving rural Africa pre-term. After an extensive period of investing and giving it all, they are often depleted, disheartened, or even cynical.

I have seen the rural community query international people, wary of motives, highlighting misunderstandings, and resenting interference. These are all hurts due to cultural divides.

It is not a pretty picture.. In rural Africa, foreigners are still mythical creatures, considered equal to having money. People from wealthy countries – and, remarkably, nationals from major towns, arriving in private vehicle - are considered as having unlimited resources, and consequently approached as such. Explanations of resource limitations fail to register. Possibly it is only local people living long term and close-up to such mythical people who might dare to attest to certain levels of resource limitations.

On the other hand, international people often have little knowledge of the local environment, or even the country. Communication is difficult due to language barriers. Further, there is a gaping divide in levels of experience making evenly matched dialogue practically impossible. Also, international people in rural Africa are limited in their abilities to extend relationships to the middle class, who live mostly in cities but possibly address identical contingencies.

Due to the cultural divide, local and non-local people are hampered in interpreting answers to questions from each other. Knowledge of social codes and structures are imperfect, and understanding of the context, within which 'who communicates what', 'how does communication takes place', and 'why does communication takes place' is limited. Therefore assessment of answers is heavily challenged and underlying

reasoning is often validated only after a long time of observation.

Frequent resource-sharing requests by local people lead to mutual frustration, with international people not recognising communal inclusion offers, and local people not recognising the other's intent. The local environment is pervasive, and people from outside face the issue of how to assimilate, or risk emotional depletion and separation.

Reminiscense^{lii}

Almost one year after formal hand-over of leadership at Macha Works to Fred Mweetwa and his team, I look back with gratitude. It has been a roller-coaster ride for the team from the word 'Go', being brutally tested by suppliers, stakeholders, and users alike. Against all odds, and with much discouragement from those apparently in denial that Africa-Can-Lead, Fred and his team have shown unique aptness in leading a rural-based African co-operative organisation forward.

There is still lots to learn and innovate, for instance on African relatio-management styles, and how to reconcile them with dominant rational approaches. There is also the need to grow the collective environment to embrace both the intangible and the tangible, so all will be able to recognise the team's great achievements.

Often in successful institutes, the originator is not there five years later. Maybe that person is on the board, or somewhere else, but the person is out, usually with bitterness.

"At its inception, a company is often the 'lengthened shadow of one man,'" Peter Drucker wrote in his book, *Practice of Management*, "but it will not grow and survive unless the one-man top is converted into a team." Inspiring teamwork is not an overnight event. It takes time, and maybe even more so in a resource-challenged environment like rural Africa.

In my perception, LinkNet/Macha Works has been a team effort from the beginning. From a western perspective it might have looked like Drucker's description. But from an African perspective it has not looked like that at all. From that perspective, the governing attributes are clearly seen, encompassing inclusiveness, cooperation, flexibility, and care. There is no room for bitterness, there is real joy.

Focus on progress of **local talent** has resulted in teams of highly talented people, set free to progress towards reaching

their collective and individual potential. These men and women are taking their commitments seriously, and developing competence in an innovative, thoroughbred African culture.

A wonderful future is assured, whatever the circumstances.

Respectfully Yours^{liii}

Everyday I am thrilled to be able to interact with people in rural areas, to witness characteristics of individuals and communities, and see rural leaders and members wielding their power of choice.

How valuable people and rural areas are! How privileged we are, in these times, to focus on inspiring each other to reach our common and individual potential.

I am thankful for the local communities to open themselves up and provide welcome to me and my family. I am grateful for the national leadership for permission and guidance, to associate and live. It is instructive to live up close and see structures of leadership - how chiefs and headmen work in governing their subjects - and to appreciate the complexity of tasks at hand in national government.

I am humbled by the support of many, often from far away. I recognise the sacrifices made by individuals and associations, to support rural communities and people they do not even know.

I thank everyone in authority - local, regional and national civil and social leadership - and numerous partners, for abundant blessings, and for allowing us to partake in rural life, which is life to the fullest!

Places and Dates

i	http://gertjanvanstam.blogspot.com
ii	Atlantic Ocean, 25 October 2008
iii	Macha, 30 October 2008
iv	Macha, 2 November 2008
v	Macha, 7 November 2008
vi	Macha, 11 November 2008
vii	Macha, 14 November 2008
viii	Macha, 16 November 2008
ix	Macha, 17 November 2008
x	Macha, 19 November 2008
xi	Macha, 19 November 2008
xii	Macha, 27 November 2008
xiii	Macha, 14 December 2008
xiv	Macha, 17 January 2009
xv	Macha, 3 February 2009
xvi	Macha, 10 February 2009
xvii	Macha, 10 March 2009
xviii	Macha, 17 February 2009
xix	Pretoria, 13 March 2009
xx	Macha, 31 March 2009
xxi	Macha, 3 April 2009
xxii	Macha, 5 May 2009
xxiii	Macha, 31 May 2009
xxiv	Macha, 12 June 2009
xxv	Cape Town, 17 July 2009
xxvi	Macha, 20 July 2009
xxvii	Macha, 10 September 2009
xxviii	Macha, 25 October 2009
xxix	Macha, 27 October 2009
xxx	Macha, 2 February 2010
xxxi	Macha, 9 February 2010
xxxii	Macha, 2 March 2010
xxxiii	Macha, 4 March 2010
xxxiv	Macha, 8 March 2010
xxxv	Macha, 10 March 2010

xxxvi	Macha, 8 June 2010
xxxvii	Macha 9 June 2010
xxxviii	Macha, 16 June 2010
xxxix	Macha, 3 September 2010
xl	Macha, 15 September 2010
xli	Macha, 16 September 2010
xlii	Macha, 27 October 2010
xliii	Macha, 14 December 2010
xliv	Macha, 22 December 2010
xlv	Macha, 23 December 2010
xlvi	Macha, 12 January 2011
xlvii	Macha, 15 January 2011
xlviii	Macha, 28 January 2011
xl ix	Macha, 19 February 2011
l	Macha, 31 May 2011
li	Macha, 31 May 2011
lii	Macha, 1 March 2011
liii	Macha, 3 June 2011